We Claim:

1. A method of reducing cholesterol synthesis in a patient in need thereof, comprising administering a compound capable of increasing cholesta-5,7-diene-3β-27 diol (27-hydroxy-7-dehydrocholesterol) levels, thereby resulting in a reduction of cholesterol synthesis.

2. The method of claim 1, wherein the compound administered is 27-hydroxy-7-dehydrocholesterol.

3. The method of claim 1, wherein the compound administered increases both 27-hydroxy-7-dehydrocholesterol and cholesta-5,8-diene-3β-27 diol (27-hydroxy-8-dehydrocholesterol).

4. The method of claim 3, wherein the compound administered is 27-hydroxy-8-dehydrocholesterol.

5. The method of claim 3, wherein the compound administered is a combination of 27-hydroxy-7-dehydrocholesterol and 27-hydroxy-8-dehydrocholesterol.

6. A method of reducing cholesterol synthesis in a patient in need thereof, comprising administering a compound capable of reducing 27-hydroxy-7-dehydrocholesterol reductase activity, resulting in an inhibition of cholesterol synthesis.

7. The method of claim 6, wherein the compound capable of reducing 27-hydroxy-7-dehydrocholesterol reductase is an inhibitor of 27-hydroxy-7-dehydrocholesterol reductase.

8. The method of claim 7, wherein the inhibitor of 27-hydroxy-7-dehydrocholesterol reductase is an anti-27-hydroxy-7-dehydrocholesterol reductase antibody.

9. The method of claim 6, wherein the compound capable of reducing 27-hydroxy-7-dehydrocholesterol reductase is a compound which interferes with the synthesis of 27-hydroxy-7-dehydrocholesterol reductase.

10. The method of claim 6, wherein the compound which interferes with the synthesis of 27-hydroxy-7-dehydrocholesterol reductase is a nucleic acid.

11. The method of claim 10, wherein the nucleic acid encoding a peptide or protein inhibitor of 27-hydroxy-7-dehydrocholesterol reductase.

12. The method of claim 10, wherein the nucleic acid is an antisense sequence or catalytic RNA capable of interfering with the expression of 27-hydroxy-7-dehydrocholesterol reductase.

13. A method of reducing cholesterol synthesis in a patient in need thereof, comprising administering a compound capable of increasing 27-hydroxy-7-dehydrocholesterol and 27-hydroxy-8-dehydrocholesterol levels, thereby resulting in a reduction of cholesterol synthesis.

14. The method of claim 13, wherein the compound capable of increasing 27-hydroxy-7-dehydrocholesterol and 27-hydroxy-8-dehydrocholesterol levels is a compound capable of reducing 27-hydroxy-7-dehydrocholesterol reductase activity.

15. The method of claim 13, wherein the compound is cholesta-5,7-diene-3β-27 diol (27-hydroxy-7-dehydrocholesterol) or cholesta-5,8-diene-3β-27 diol (27-hydroxy-8-dehydrocholesterol).

16. A screening method for identifying agent compounds capable of inhibiting 27-hydroxy-7-dehydrocholesterol reductase activity, comprising measuring enzymatic activity 27-hydroxy-7-dehydrocholesterol reductase in the presence of a test compound, wherein a compound which reduces 27-hydroxy-7-dehydrocholesterol reductase activity relative to a control is identified as a compound capable of inhibiting 27-hydroxy-7-dehydrocholesterol reductase activity.

17. A screening method for identifying agent compounds capable of interfering with the expression of 27-hydroxy-7-dehydrocholesterol reductase activity, comprising determining the level of 27-hydroxy-7-dehydrocholesterol reductase or its encoding mRNA , wherein a compound which reduces 27-hydroxy-7-dehydrocholesterol reductase levels (or its encoding mRNA) relative to a control is identified as a compound capable of inhibiting the expression 27-hydroxy-7-dehydrocholesterol reductase.

18. A method of increasing cholesterol degradation, comprising:

(a) providing a nucleic acid construct encoding 7α-hydroxylase to an extrahepatic cell; and

(b) expressing the nucleic acid of step (a) in the extrahepatic cell, wherein the level of 7α-hydroxylase is increased.

19. The method of claim 18, wherein the extrahepatic cell is selected from the group consisting of an epithelial cell, a skeletal muscle fiber, and a smooth muscle fiber.

20. The method of claim 18, wherein the nucleic acid construct further encodes oxysterol 7α-hydroxylase.